

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:

MITCHELL

Serial No.: Not yet assigned

Filed: Herewith

Atty. File No.: 3374-4-1-1

For: "METHOD AND APPARATUS FOR
ERECTING WALL PANELS"

) Group Art Unit:

) Examiner:

) FIRST PRELIMINARY AMENDMENT

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TYPED OR PRINTED NAME: Christine Jacquet

SIGNATURE: Christine Jacquet

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Prior to the initial review of the above-identified patent application by the Examiner, please enter the following Preliminary Amendment. Although Applicants do not believe that any fees are due based upon the filing of this Preliminary Amendment, please charge any such fees to Deposit Account 19-1970.

Please amend the above-identified patent application as follows:

IN THE DRAWINGS:

Please amend Figures 1, 1A, 1B, 1C, 1D, 2, 3, 5, 6A, 6B, 8, and 10-15 as shown in the attached Request for Approval of Drawing Changes filed concurrently herewith.

IN THE SPECIFICATION:

Please replace the paragraphs beginning at page 7, lines 17, 18 and 22 with the following rewritten paragraphs:

Fig. 1A is an exploded view of interconnected upper and lower perimeter framing members attached to panels 54a and 54b of the first embodiment viewed from in front of the wall panels, with a portion of the upper perimeter framing member being cutaway to reveal the drainage holes and capillary break;

Fig. 1B is an exploded view of the lower perimeter framing member 58b of the first embodiment;

Please replace the paragraphs beginning at page 8, lines 2, 4, 16 and 19 with the following rewritten paragraphs:

Fig. 1C is an exploded view of interconnected upper and lower perimeter framing members 66b and 58d of the first embodiment;

Fig. 1D is an exploded view of the upper perimeter framing member 66d of the first embodiment;

Fig. 6A depicts a number of adjoining wall panels sealed by a third embodiment of a wall panel mounting according to a second aspect of the present invention;

Fig. 6B is an exploded view of interconnected lower perimeter framing members of adjoining wall panels of the third embodiment viewed from in front of the wall panels, with the upper perimeter framing member being cutaway to reveal the flexible sheet interlock;

Please replace the paragraph beginning at page 9, line 13 with the following rewritten paragraph:

Figs. 12-13 depict a third method for installing the flexible sheet interlock which uses a shelf or lip on the perimeter framing member to protect the edges of the flexible sheet interlock;

Please replace the paragraph beginning at page 11, line 14 with the following rewritten paragraph:

Referring to Figs. 1A, 2 and 3, the upper and lower perimeter framing members 66 and 58 define a recess 82. The capillary break 74 extends downwardly from the upper perimeter framing member 66 to divide the recess 82 into a circulating chamber 86 and an inlet 90. The capillary break 74 is located nearer the wall panel 54 than the drainage holes 78 to block or impede the flow of droplets 94 entrained in the airstream 98 into the drainage holes 78.

Please replace the paragraph beginning at page 14, line 17 with the following rewritten paragraph:

Fig. 4 depicts a second embodiment of a wall panel mounting assembly according to the first aspect of the present invention. In the second embodiment, the drainage holes 150 are located on a substantially vertical surface 154 of the lower perimeter framing member 158. Because a vertically oriented drainage hole is more susceptible to the entry of fluids than the horizontally oriented drainage hole of Fig. 2, the preferred minimum distance " D_H " from the rear surface 162 of the capillary break 168 for the second embodiment is greater than the preferred minimum distance " D_H " from the rear surface for the first embodiment. More preferably, the drainage hole 150 is located at least about 0.75 inches from the rear surface 162 of the capillary break. The center of the

drainage hole 150 is located above the free end 124 of the capillary break 168 and more preferably the entire drainage hole 150 is located above the free end 124 of the capillary break 168.

Please replace the paragraph beginning at page 15, lines 7 and 19 with the following rewritten paragraph:

Fig. 6A depicts a third embodiment of a wall panel attachment system according to a second aspect of the present invention. The system uses a flexible sheet interlock to seal adjacent perimeter framing members. At the joint between the upper perimeter framing members 66a,b of adjacent wall panels 54a,b, a flexible sheet interlock 250 inhibits fluid migration along the joint defined by the adjacent ends 254a,b of the adjacent gutters of the perimeter framing members 66a,b. The flexible sheet interlock 250 realizes this result by retaining fluids in the adjacent gutters 83a,b. Accordingly, the interface between the flexible sheet interlock 250 and the gutter walls is substantially impervious to fluid migration. As can be seen from Fig. 6B, the flexible sheet interlock has sufficient flexibility to conform to the "U"-shaped contour of the gutter.

Please replace the paragraph beginning at page 16, line 1 with the following rewritten paragraph:

Referring to Figs. 6A and 7, the interface 260 can include an adhesive 264 between the flexible sheet interlock 250 and each of the three gutter walls 268a,b,c to retain the interlock 250 in position. Although the flexible sheet interlock 250 itself may possess adhesive properties, an adhesive, preferably having sealing properties, has been found to assist the formation and maintenance of an integral seal between the interlock 250 and the gutter walls 268. The most preferred adhesive is a high performance compressed joint sealant that can "set up" or harden and

bond to the gutter wall and the interlock. Examples of such sealants include silicone, urethane, and epoxy. Because the interlock 250 itself absorbs all of the thermal movement of the wall panels, there is no requirement for the adhesive 264 to stay resilient and move. The end result is a more economical system for sealing adjacent perimeter framing members that has a useful life equal to that of the exterior wall panel system.

IN THE CLAIMS:

Please cancel Claims 1-13 and add the following new Claims 14-55 such that all pending claims are as follows:

1-13. Canceled.

14. (New) A wall system, comprising:

(a) a panel having a groove in a first surface of the panel;

(b) a perimeter framing member for engaging a peripheral edge of the panel, the perimeter framing member having two opposing surfaces forming a pocket for receiving the panel; and

(c) an attachment member having a first bearing surface to be received in the groove in the first surface of the panel and a second bearing surface for engaging a surface of the perimeter framing member to align and hold the panel in the pocket, wherein at least a portion of the attachment member is to be positioned between an opposing surface of the pocket and a surface of the panel.

15. (New) The wall system of Claim 14, wherein the other opposing surface of the pocket contacts a second surface of the panel when the panel is engaged with the attachment member.

16. (New) The wall system of Claim 15, wherein the second bearing surface is received in a groove in the opposing surface of the pocket when the panel is engaged with the attachment member.

17. (New) The wall system of Claim 14, wherein the second bearing surface engages a surface of the perimeter framing member located outside of the pocket, when the panel is engaged with the attachment member.

18. (New) The wall system of Claim 17, wherein the attachment member is "L" shaped.

19. (New) The wall system of Claim 14, further comprising a wedge member for engaging simultaneously a surface of the attachment member and a surface of the perimeter framing member to hold the attachment member in position against the panel when the panel is engaged with the attachment member.

20. (New) A wall system, comprising:

(a) a panel having a groove in a first surface of the panel;

(b) a perimeter framing member for engaging a peripheral edge of the panel, the perimeter framing member having two opposing surfaces forming a pocket for receiving the panel;

and

(c) an attachment member having a first bearing surface to be received in the groove in the first surface of the panel and a second bearing surface for engaging a surface of the perimeter framing member to align and hold the panel in the pocket; and

(d) a retention member for engaging a surface of the attachment member and a surface of the perimeter framing member for retaining the attachment member in position when the attachment member is engaged with the panel.

21. (New) The wall system of Claim 20, wherein the two opposing surfaces are substantially parallel to one another and to the first surface of the panel, when the attachment member is engaged with the panel.

22. (New) The wall system of Claim 20, wherein the attachment member is in the shape of an "L".

23. (New) The wall system of Claim 22, wherein the retention member engages the attachment member at the base of the "L".

24. (New) The wall system of Claim 20, wherein the retention member functions in the same manner as a wedge.

25. (New) The wall system of Claim 20, wherein the first bearing surface is at least partially located in the pocket when the attachment member is engaged with the panel.

26. (New) The wall system of Claim 20, wherein, when the attachment member is engaged with the panel, the first surface of the panel is spaced from one of the opposing surfaces of the perimeter framing member and a second surface of the panel, which is in an opposing relationship with the first surface, engages the other opposing surface of the perimeter framing member.

27. (New) The wall system of Claim 14, further comprising a fastener to fasten the attachment member to the perimeter framing member.

28. (New) The wall system of Claim 14, wherein the attachment member is rod-shaped.

29. (New) The wall system of Claim 14, wherein the panel is folded such that the peripheral edge of the panel is offset from a face of the panel.

30. (New) The wall system of Claim 14, wherein the panel is at least one of wood, plastic, metal, ceramics, masonry, and composites thereof.

31. (New) The wall system of Claim 20, wherein the retention member is a fastener.

32. (New) The wall system of Claim 20, wherein the attachment member is rod-shaped.

33. (New) The wall system of Claim 20, wherein the panel is folded such that the peripheral edge of the panel is offset from a face of the panel.

34. (New) The wall system of Claim 20, wherein the panel is at least one of wood, plastic, metal, ceramics, masonry, and composites thereof.

35. (New) A wall system, comprising:

(a) a panel having first and second surfaces and a groove in the first surface of the panel;

(b) at least one perimeter framing member for engaging the panel, the at least one perimeter framing member having two opposing first and second surfaces forming a pocket for receiving the panel; and

(c) an attachment member, the attachment member being received in the groove and engaging a surface of the at least one perimeter framing member to align and hold the panel in the pocket.

36. (New) The wall system of Claim 35, wherein at least a portion of the attachment member is positioned between at least one of the opposing first and second surfaces of the pocket and at least one of the first and second surfaces of the panel.

37. (New) The wall system of Claim 36, wherein the other of the opposing first and second surfaces of the pocket contacts a second surface of the panel when the panel is engaged with the attachment member.

38. (New) The wall system of Claim 37, wherein the second bearing surface is received in a groove in the opposing surface of the pocket when the panel is engaged with the attachment member.

39. (New) The wall system of Claim 35, wherein the second bearing surface engages a surface of the at least one perimeter framing member located outside of the pocket, when the panel is engaged with the attachment member.

40. (New) The wall system of Claim 39, wherein the attachment member is “L” shaped.

41. (New) The wall system of Claim 35, further comprising a wedge member for engaging simultaneously a surface of the attachment member and a surface of the at least one perimeter framing member to hold the attachment member in position against the panel when the panel is engaged with the attachment member.

42. (New) The wall system of Claim 35, further comprising a fastener to fasten the attachment member to the at least one perimeter framing member.

43. (New) The wall system of Claim 35, wherein the attachment member is rod-shaped.

44. (New) The wall system of Claim 35, wherein the panel is folded such that the portion of the panel positioned in the pocket is transverse to a face of the panel.

45. (New) The wall system of Claim 35, wherein the panel is at least one of wood, plastic, metal, ceramics, masonry, and composites thereof.

46. (New) A method for erecting a paneled surface, comprising:

(a) placing a peripheral edge of a panel in a pocket of a perimeter framing member, the pocket being formed between opposing surfaces of the perimeter framing member;

(b) engaging an attachment member with a surface of the panel and with a surface of the perimeter framing member; and

(c) engaging a retention member with a surface of the attachment member and a surface of the perimeter framing member to hold the attachment member in position against the panel.

47. (New) The method of Claim 46, wherein the engaging step (b) includes the step of placing the attachment member at least partially between a surface of the pocket and the surface of the panel.

48. (New) The method of Claim 46, wherein the retention member is a wedge.

49. (New) The method of Claim 46, further comprising after step (c), bending a surface of the panel around a second groove extending a length of the peripheral edge of the panel.

50. (New) The method of Claim 46, wherein the attachment member is "L" shaped.

51. (New) The method of Claim 50, wherein the retention member engages the attachment member at the base of the "L".

52. (New) The method of Claim 46, wherein the attachment member includes a bearing surface having a radius of curvature.

53. (New) A method for sealing a joint between adjacent perimeter framing members from terrestrial fluids, comprising:

passing a terrestrial fluid at a first velocity through a gap between a capillary break on at least one of the perimeter framing members and an opposing surface of the other of the at least one of the perimeter framing members;

passing the terrestrial fluid at a second velocity that is lower than the second velocity into a circulating chamber defined by the capillary break and walls of the perimeter framing members;

collecting the terrestrial fluid in the circulating chamber; and

passing the collected terrestrial fluid through the gap and inlet portion and into the terrestrial environment.

54. (New) The method of claim 53, further comprising:

passing the terrestrial fluid at an input velocity through an inlet portion of a recess formed by the adjacent perimeter framing members and wherein the first velocity is more than the input velocity.

55. (New) The method of claim 54, wherein a lower surface of the circulatory chamber slopes downwardly in the direction of the inlet portion.

REMARKS

Based on a recent interview with the Examiner, Applicant is filing this continuation application. According to the Examiner, if a suitable Terminal Disclaimer is filed, newly added claims 14-45 are allowable. Filed concurrently herewith is a Terminal Disclaimer based on U.S. Patent 5,809,729. Applicant has further added new claims 46-55, which Applicant submits are allowable over the prior art.

Based upon the foregoing, Applicants believe that all pending claims are in condition for allowance and such disposition is respectfully requested. In the event that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

SHERIDAN ROSS P.C.

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Denver, Colorado 80202-5141
(303) 863-9700

Date: June 20, 2001

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Paragraphs beginning at lines 17, 18 and 22 of page 7 have been amended as follows:

Fig. 1A is an exploded view of interconnected upper and lower perimeter framing members attached to panels 54a and 54b of the first embodiment viewed from [behind]in front of the wall panels, with a portion of the upper perimeter framing member being cutaway to reveal the drainage holes and capillary break;

Fig. 1B is an exploded view of the lower perimeter framing member 58b of the first embodiment;

Paragraphs beginning at lines 2, 4, 16 and 19 of page 8 have been amended as follows:

Fig. 1C is an exploded view of interconnected upper and lower perimeter framing members 66b and 58d of the first embodiment;

Fig. 1D is an exploded view of the upper perimeter framing member 66d of the first embodiment;

Fig. 6A depicts a number of adjoining wall panels sealed by a third embodiment of a wall panel mounting according to a second aspect of the present invention;

Fig. 6[A]B is an exploded view of interconnected lower perimeter framing members of adjoining wall panels of the third embodiment viewed from in front of the wall panels, with the upper perimeter framing member being cutaway to reveal the flexible sheet interlock;

Paragraph beginning at line 13 of page 9 has been amended as follows:

Figs. 12-13 [depicts]depict a third method for installing the flexible sheet interlock which uses a shelf or lip on the perimeter framing member to protect the edges of the flexible sheet interlock;

Paragraph beginning at line 14 of page 11 has been amended as follows:

Referring to Figs. 1A, 2 and 3, the upper and lower perimeter framing members 66 and 58 define a recess 82. The capillary break 74 extends downwardly from the upper perimeter framing member [74]66 to divide the recess 82 into a circulating chamber 86 and an inlet 90. The capillary break 74 is located nearer the wall panel 54 than the drainage holes 78 to block or impede the flow of droplets 94 entrained in the airstream 98 into the drainage holes 78.

Paragraph beginning at line 17 of page 14 has been amended as follows:

Fig. 4 depicts a second embodiment of a wall panel mounting assembly according to the first aspect of the present invention. In the second embodiment, the drainage holes 150 are located on a substantially vertical surface 154 of the lower perimeter framing member 158. Because a vertically oriented drainage hole is more susceptible to the entry of fluids than the horizontally oriented drainage hole of Fig. 2, the preferred minimum distance " D_H " from the rear surface 162 of the capillary break 168 for the second embodiment is greater than the preferred minimum distance " D_H " from the rear surface for the first embodiment. More preferably, the drainage hole 150 is located at least about 0.75 inches from the rear surface 162 of the capillary break. The center of the drainage hole 150 is located above the free end 124 of the capillary break [162]168 and more preferably the entire drainage hole 150 is located above the free end 124 of the capillary break 168.

Paragraphs beginning at lines 7 and 19 of page 15 have been amended as follows:

Fig. 6A depicts a third embodiment of a wall panel attachment system according to a second aspect of the present invention. The system uses a flexible sheet interlock to seal adjacent perimeter framing members. At the joint between the upper perimeter framing

members 66a,b of adjacent wall panels 54a,b, a flexible sheet interlock 250 inhibits fluid migration along the joint defined by the adjacent ends 254a,b of the adjacent gutters of the perimeter framing members 66a,b. The flexible sheet interlock 250 realizes this result by retaining fluids in the adjacent gutters 83a,b. Accordingly, the interface between the flexible sheet interlock 250 and the gutter walls is substantially impervious to fluid migration. As can be seen from Fig. 6[A]B, the flexible sheet interlock has sufficient flexibility to conform to the "U"-shaped contour of the gutter.

Paragraph beginning at line 1 of page 16 has been amended as follows:

Referring to Figs. 6A and 7, the interface 260 can include an adhesive 264 between the flexible sheet interlock 250 and each of the three gutter walls 268a,b,c to retain the interlock 250 in position. Although the flexible sheet interlock 250 itself may possess adhesive properties, an adhesive, preferably having sealing properties, has been found to assist the formation and maintenance of an integral seal between the interlock 250 and the gutter walls 268. The most preferred adhesive is a high performance compressed joint sealant that can "set up" or harden and bond to the gutter wall and the interlock. Examples of such sealants include silicone, urethane, and epoxy. Because the interlock 250 itself absorbs all of the thermal movement of the wall panels, there is no requirement for the adhesive 264 to stay resilient and move. The end result is a more economical system for sealing adjacent perimeter framing members that has a useful life equal to that of the exterior wall panel system.

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MITCHELL

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ERECTING WALL PANELS"

) Group Art Unit:
)

) Examiner:
)

REQUEST FOR APPROVAL OF
DRAWING CHANGES

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WASHINGTON, D.C. 20231.

TYPED OR PRINTED NAME: Christine Jacquet

SIGNATURE: Christine Jacquet

Assistant Commissioner for Patents
ATTN: OFFICIAL DRAFTSMAN
Washington, D.C. 20231

Dear Sir:

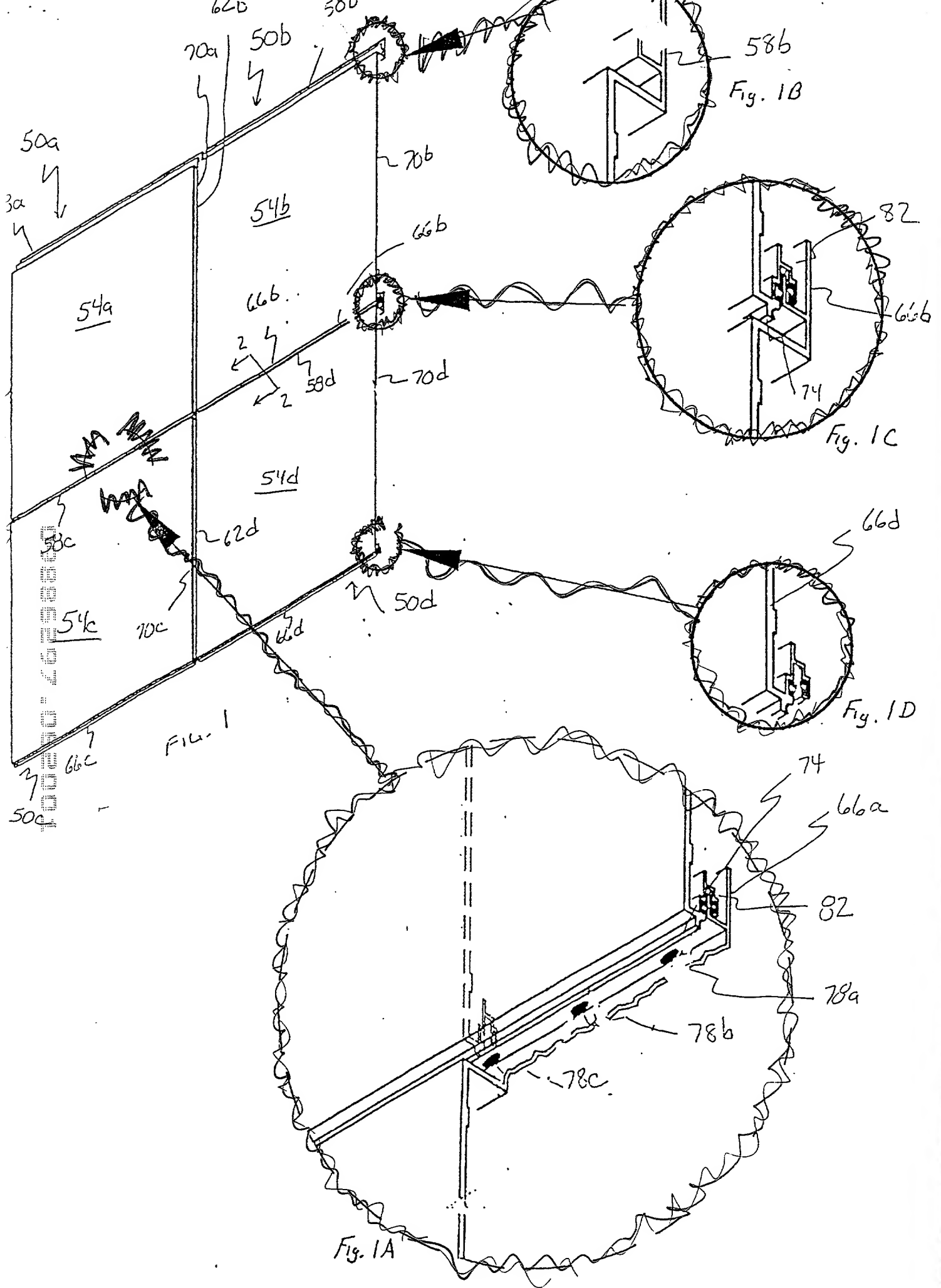
Applicant hereby requests approval of the drawing changes submitted herewith on the enclosed copies of Figs. 1, 1A, 1B, 1C, 1D, 2, 3, 5, 6A, 6B, 8, and 10-15. The changes are indicated in red.

Respectfully submitted,

SHERIDAN ROSS P.C.

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1560 Broadway, Suite 1200
Denver, CO 80202
(303) 863-9700

Date: June 20, 2001



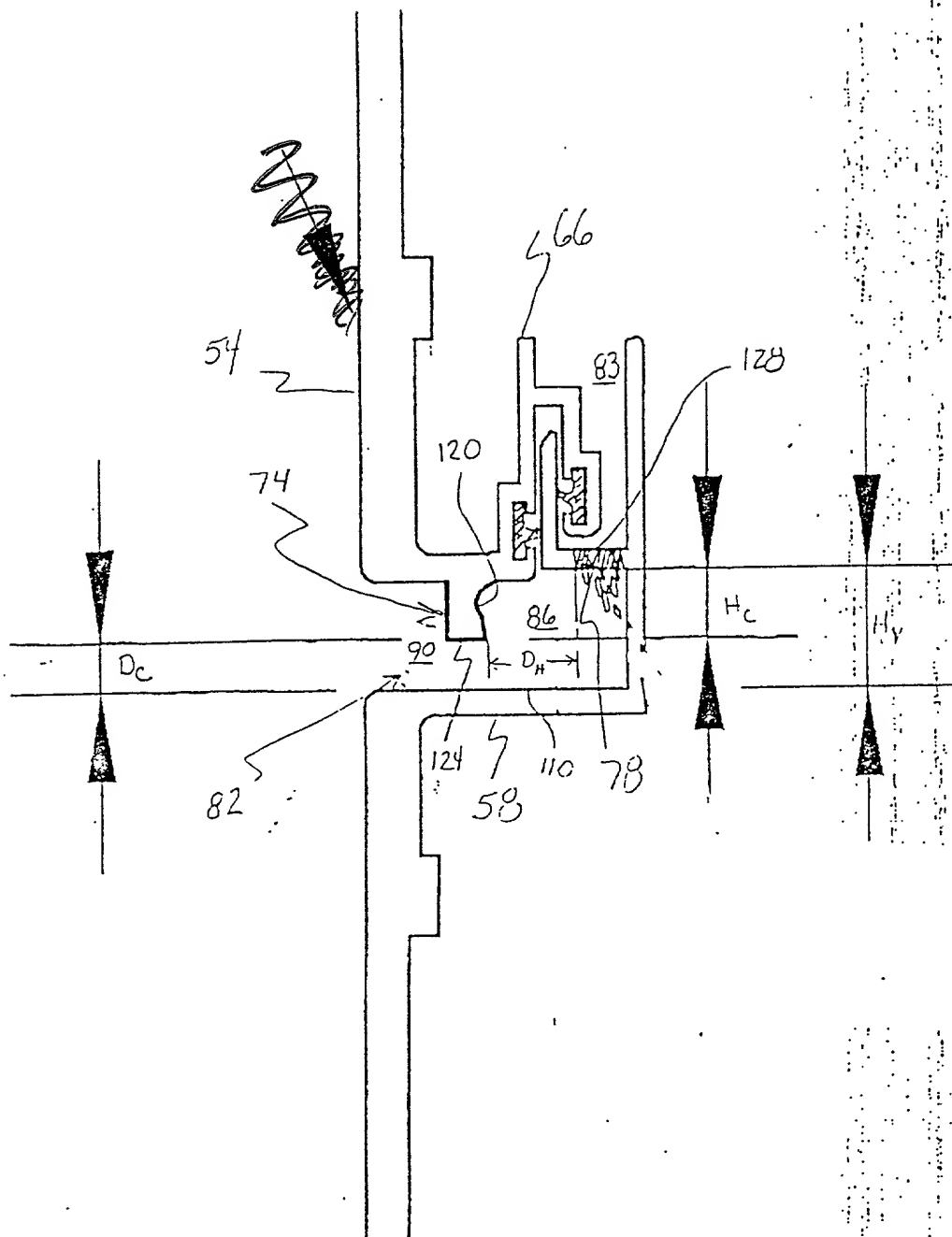


FIG. 2

98

94

54

74

66

120

86

50

110

78

82

106

102

54

94

98

FIG. 3

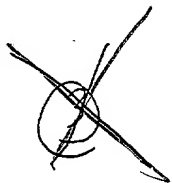


FIG. 3

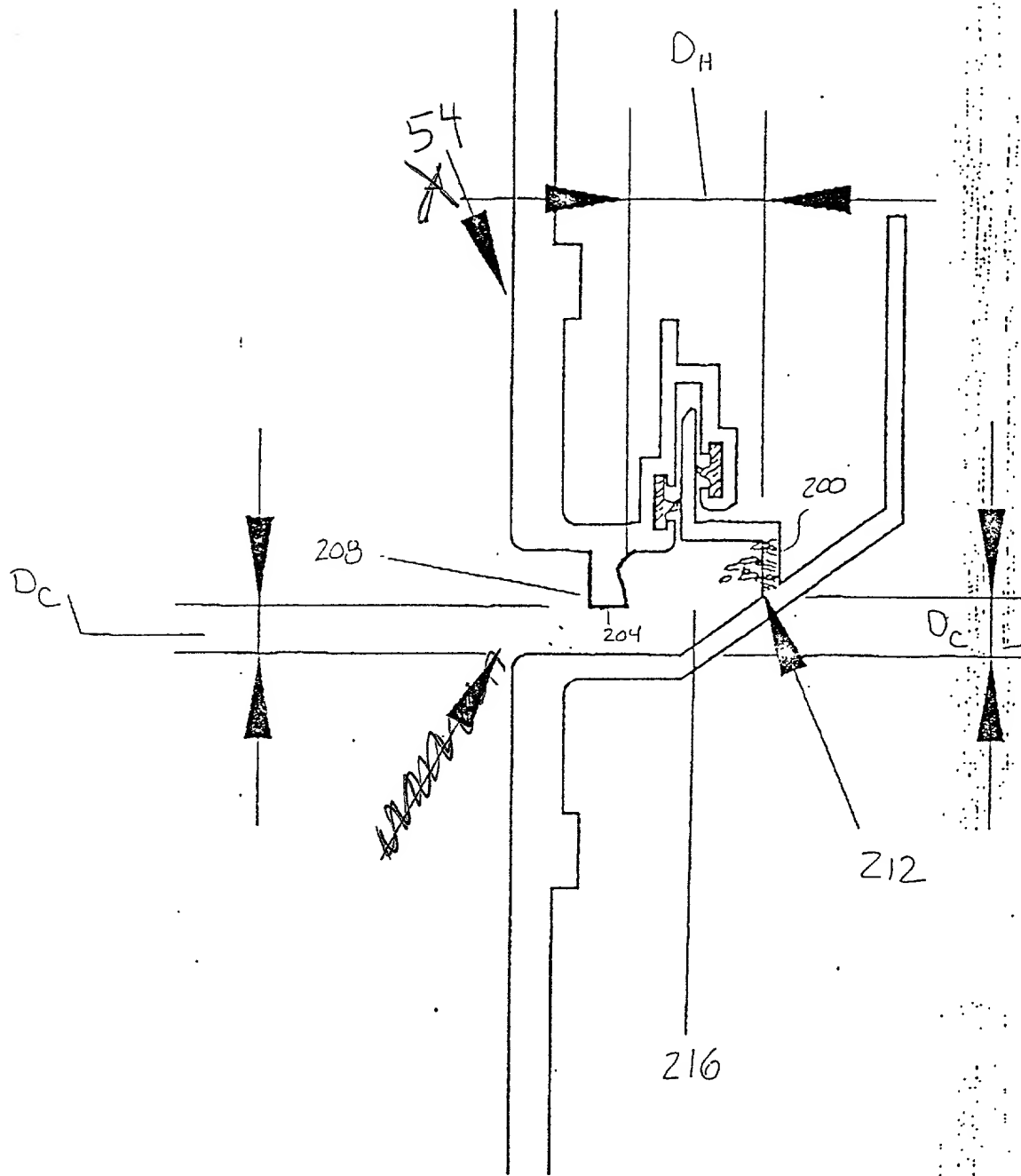
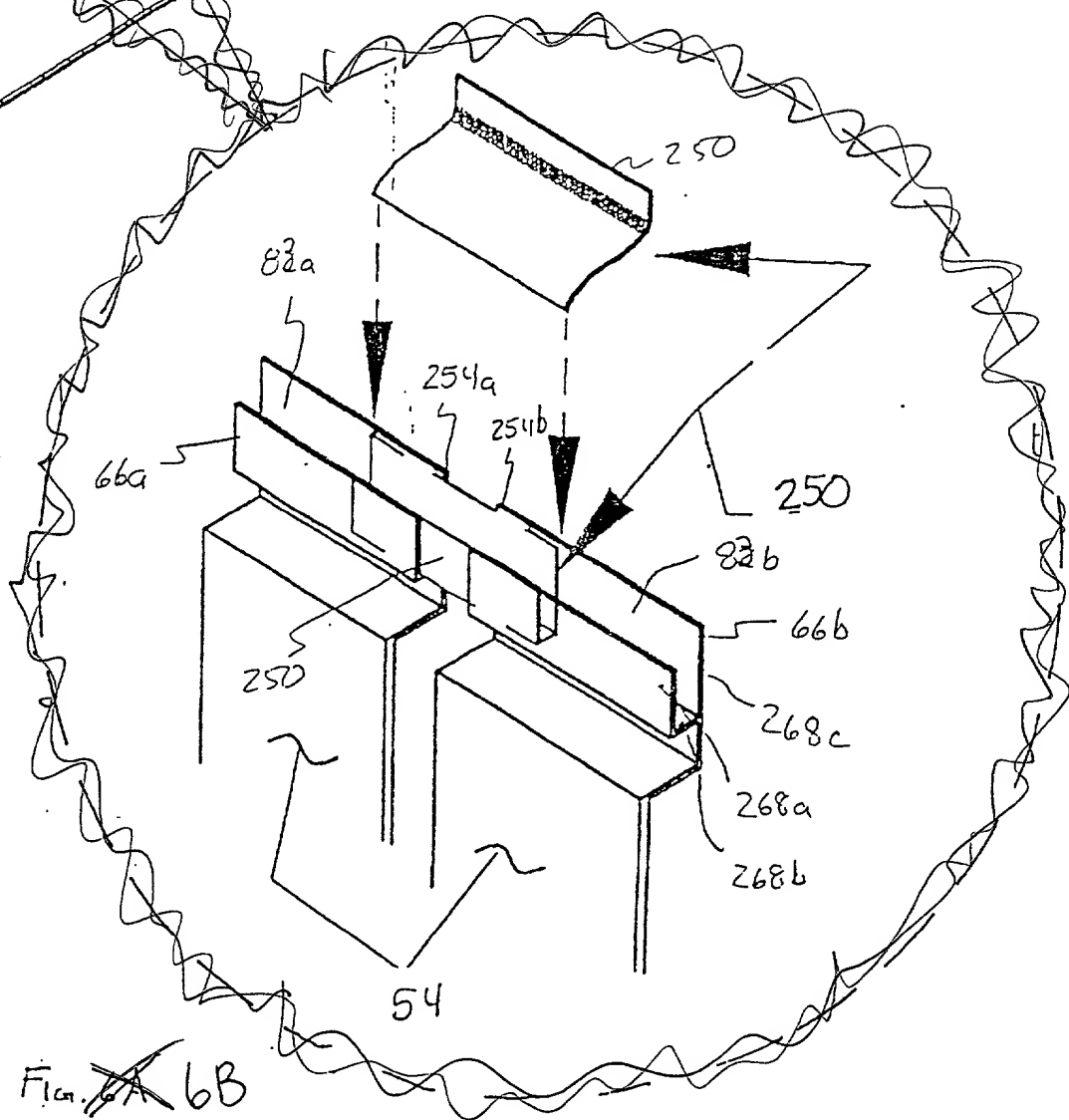
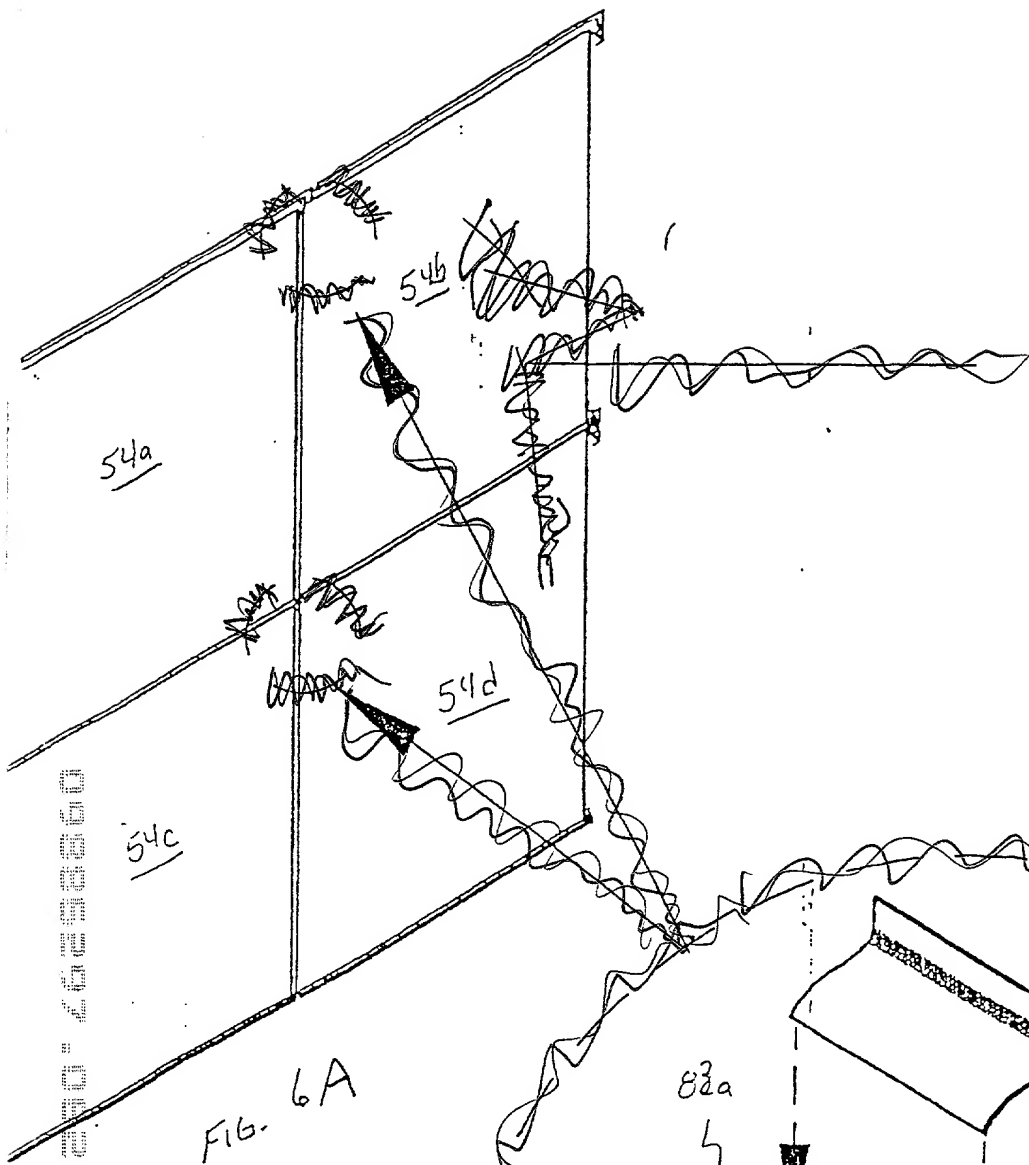
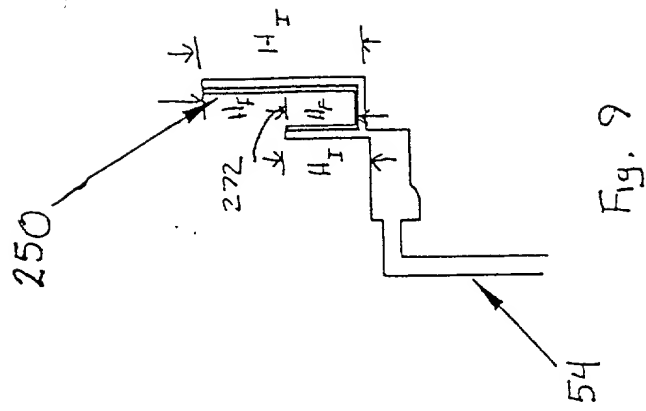
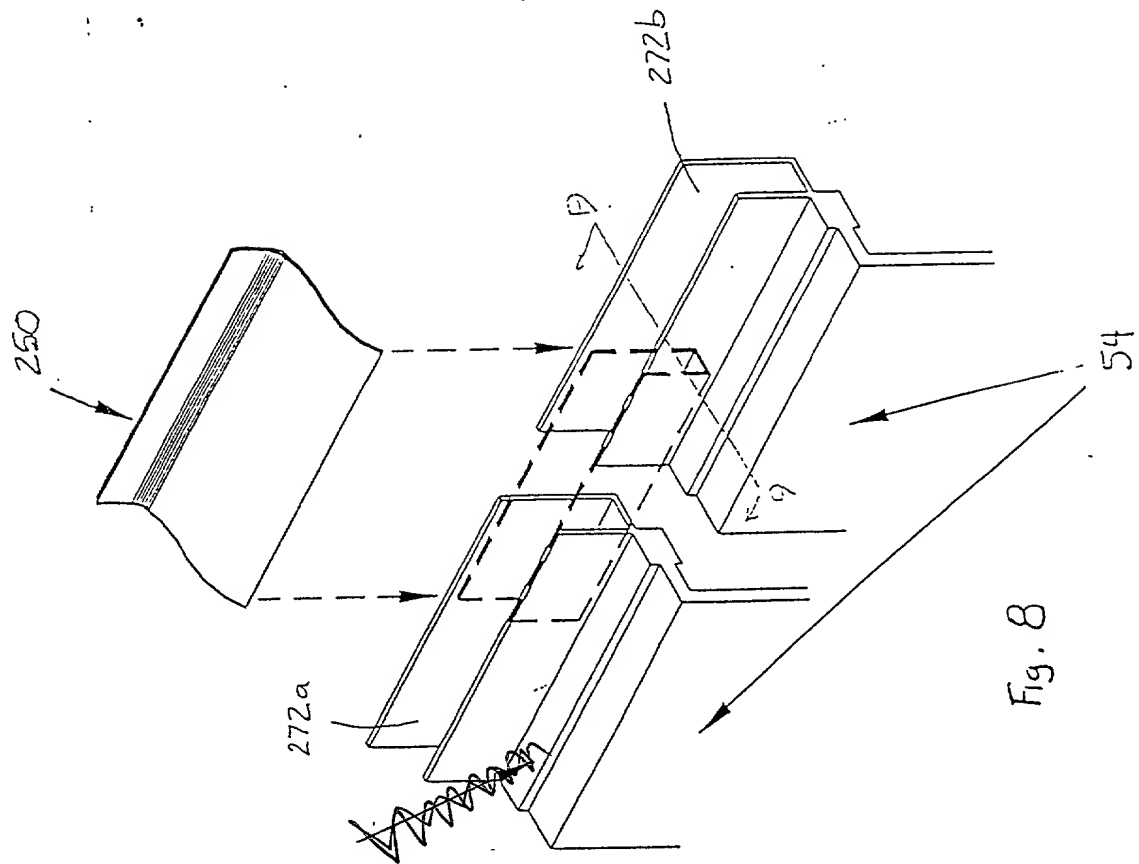


Fig. 5





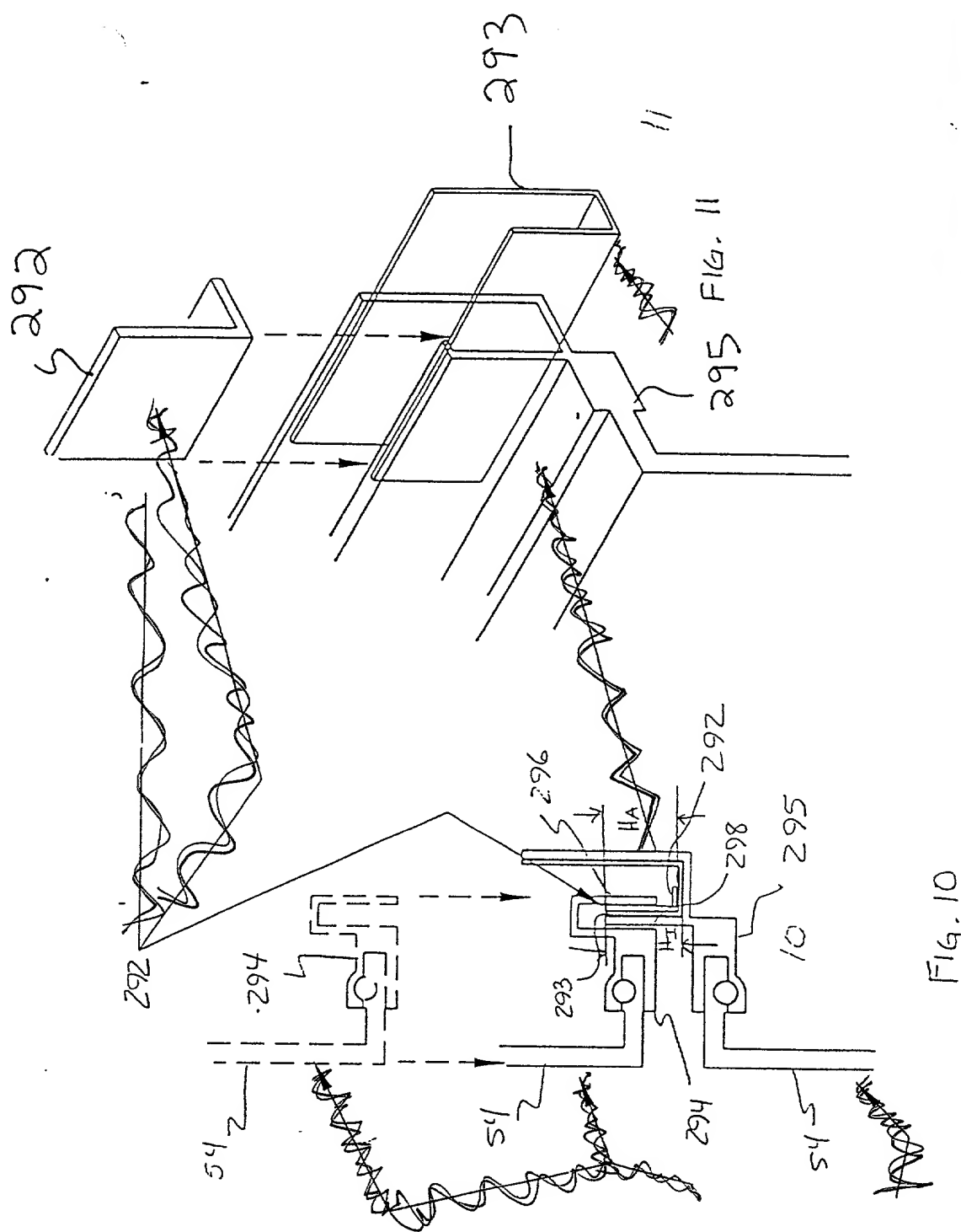


Fig. 10

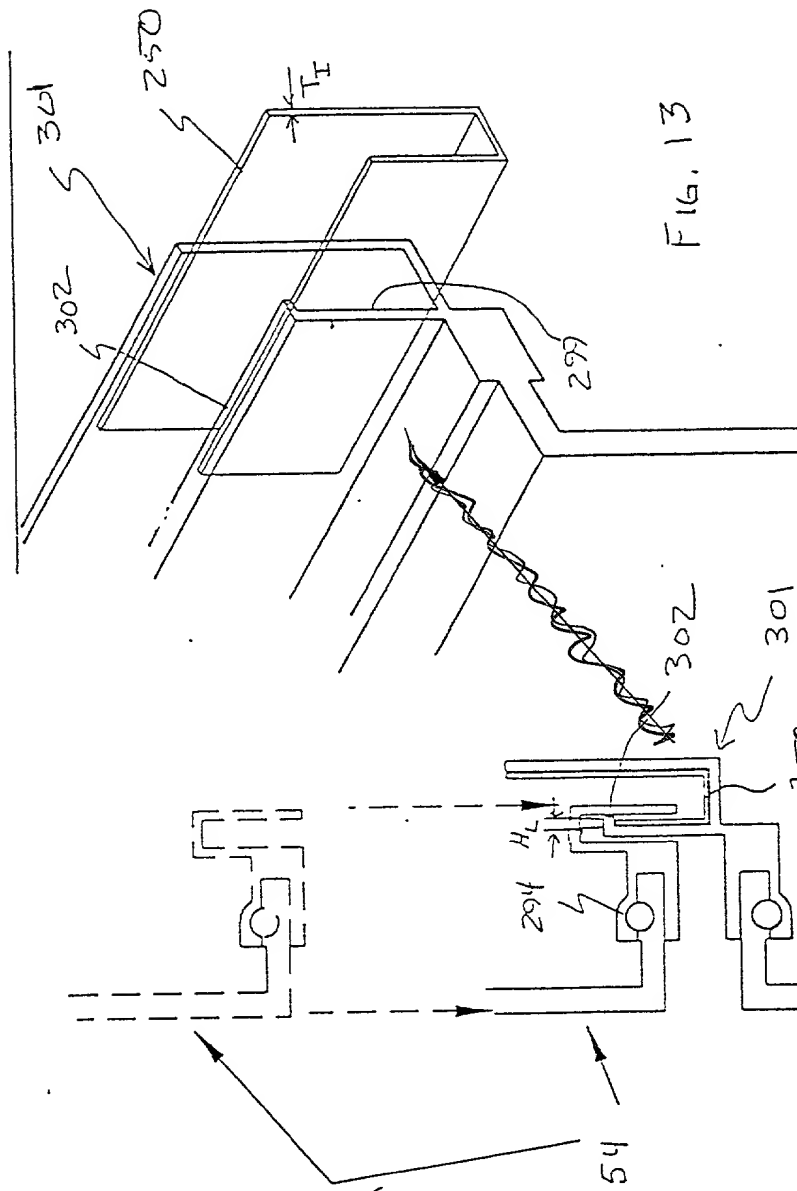


FIG. 12

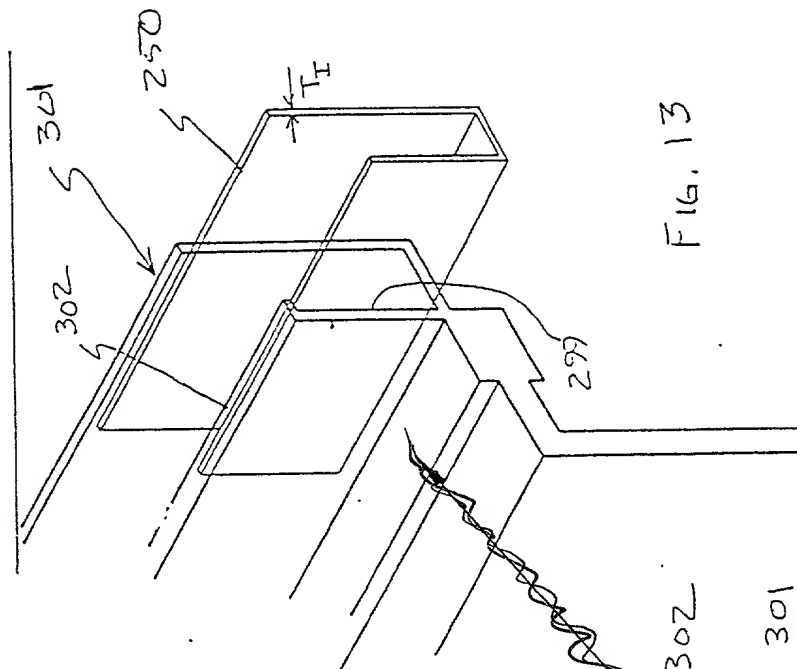


FIG. 13

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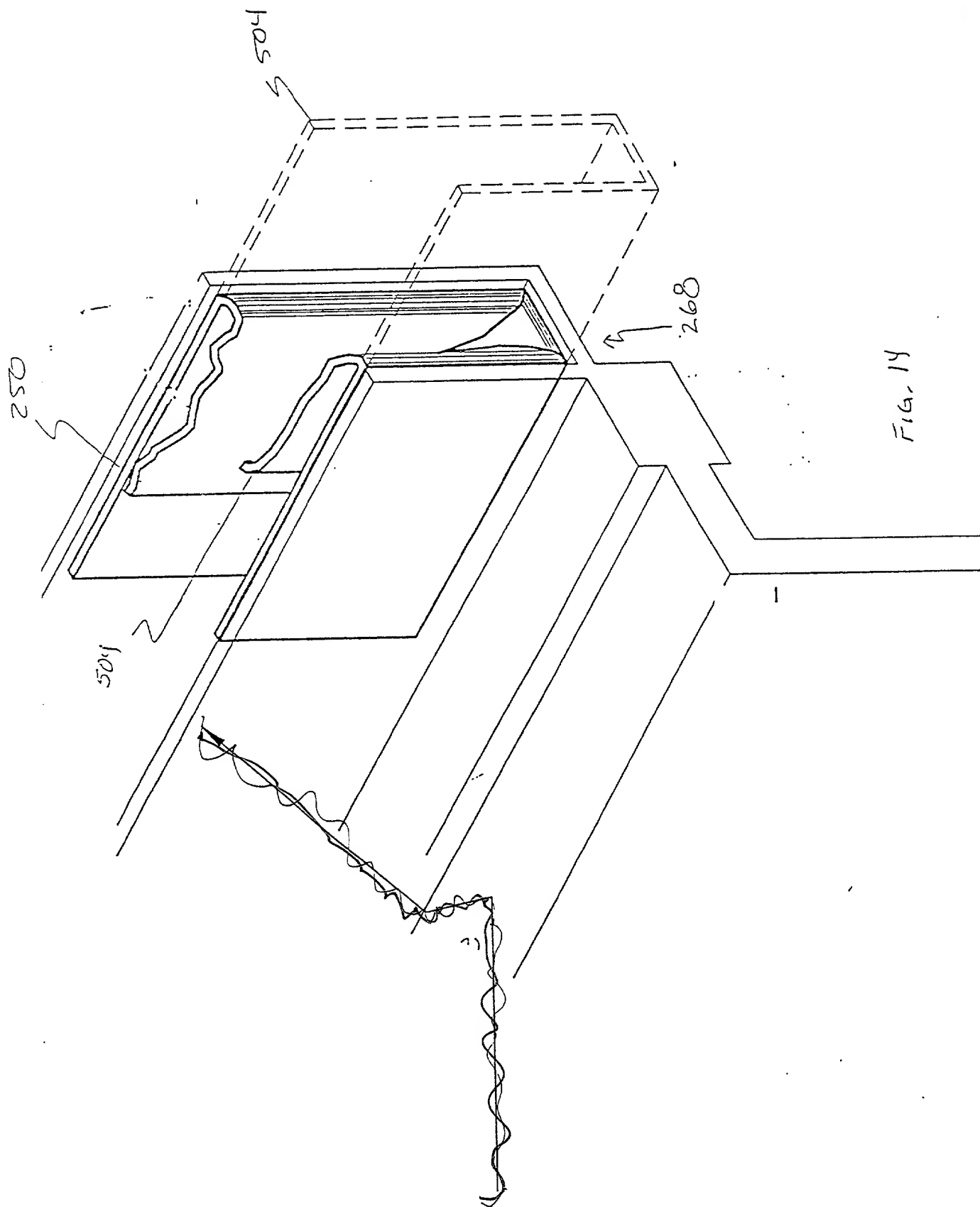


FIG. 14

~~INVENTION~~

Patent 4,336,600

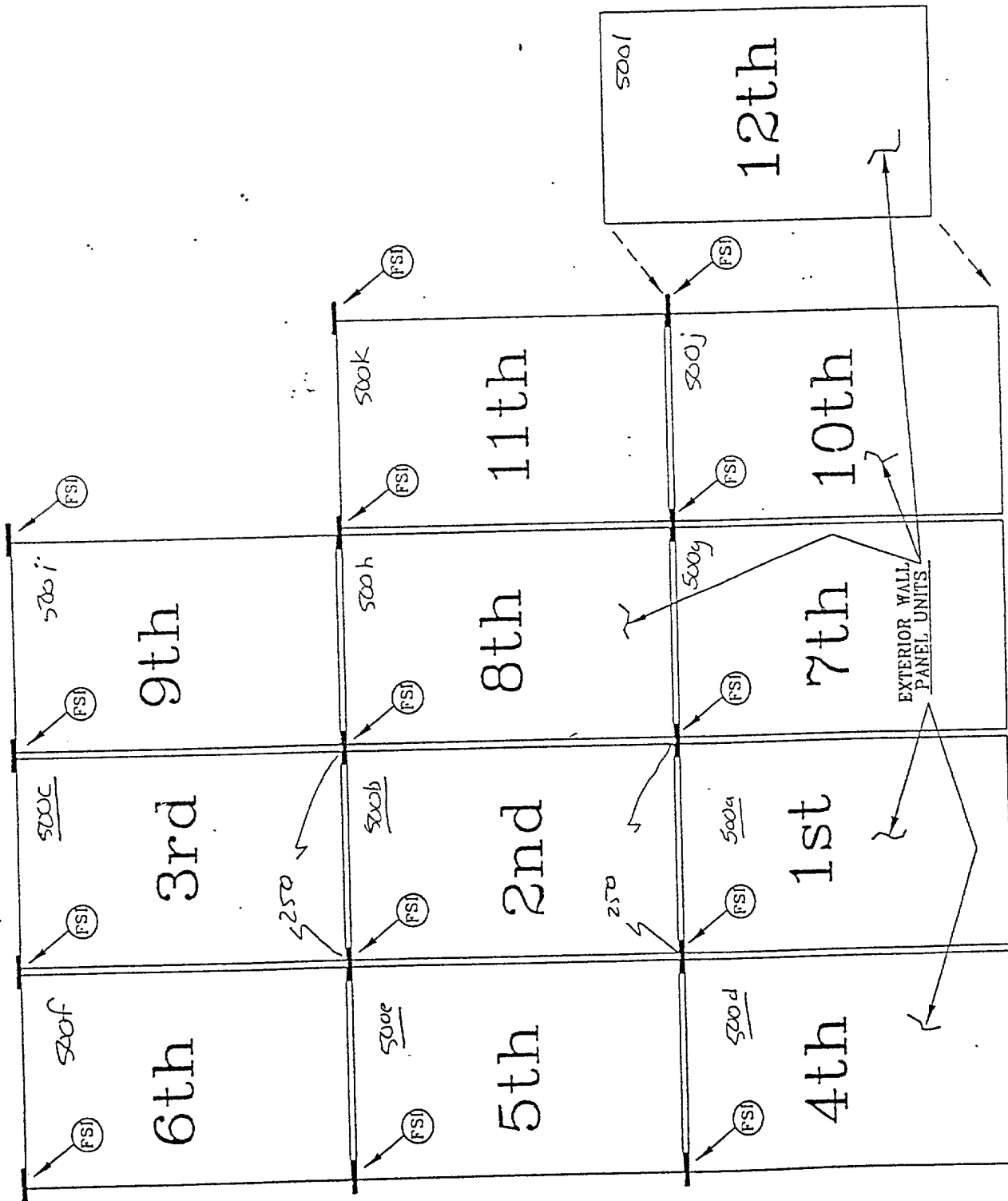


Fig. 15